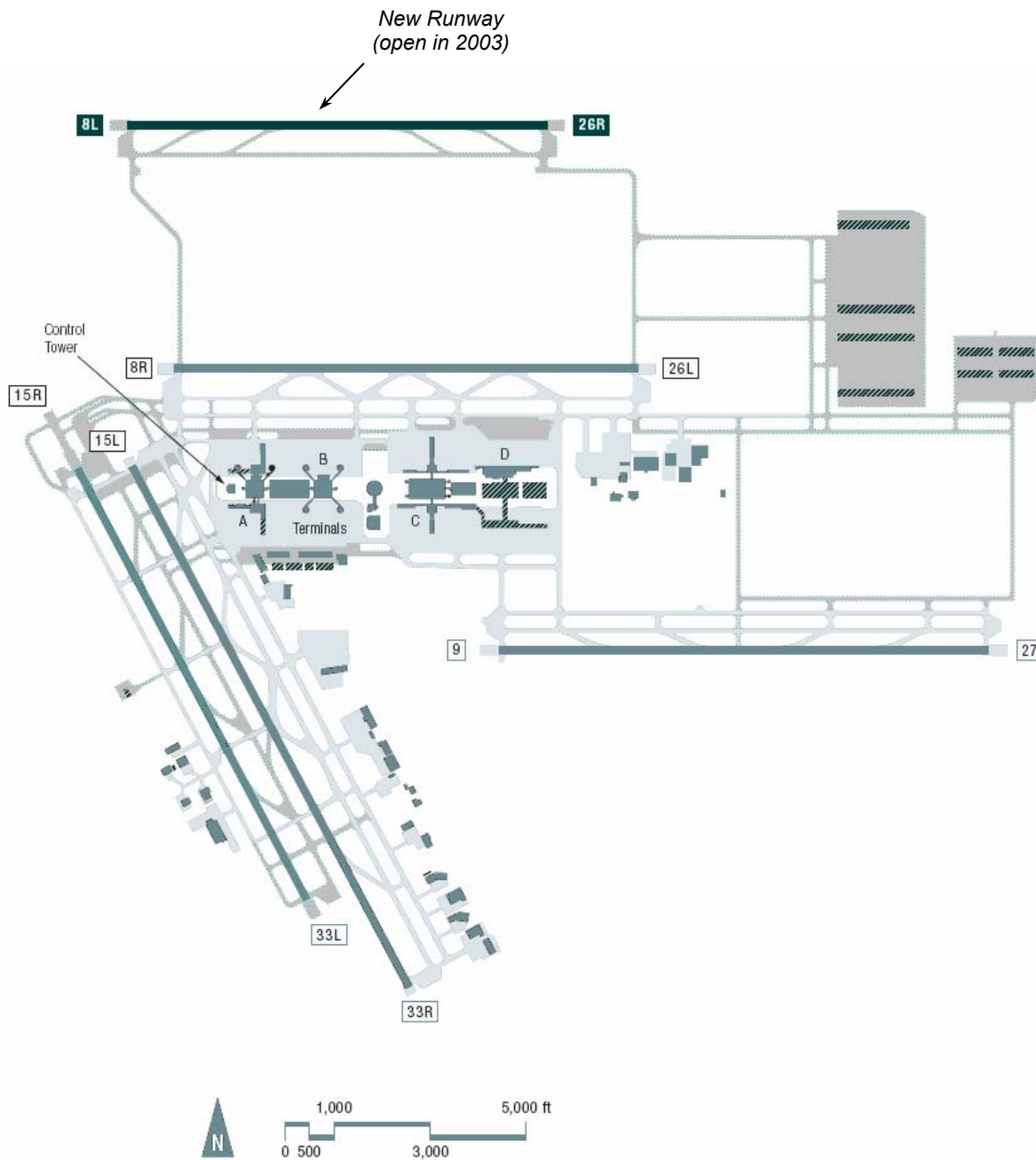


HOUSTON – Houston George Bush Intercontinental (IAH)



HOUSTON – Houston George Bush Intercontinental Airport (IAH)

Benchmark Results

- The capacity benchmark for Houston George Bush Intercontinental Airport today is 120-143 flights per hour (arrivals and departures) in Optimum weather, when visual approaches can be conducted.
- The benchmark rate is 120-141 flights per hour in Marginal conditions, and 108-112 flights per hour in IFR conditions, for the most commonly used runway configuration in these conditions.
- Note that these benchmarks do not represent balanced operations. Rather, there are more arrivals than departures in the Optimum and Marginal scenarios. If the facility reported rates are significantly unbalanced (i.e., unequal numbers of arrivals and departures), the benchmark rates will be unbalanced as well. The facility reported rates reflect current operations at the airport during a busy hour, but such unbalanced rates cannot be sustained for extended periods.
- A new runway, 9L/27R, completed in 2003, will improve capacity benchmarks at IAH by 20-32 percent. This new parallel runway, in conjunction with the existing east-west parallels at IAH, will enable triple simultaneous instrument approaches. The projected increase in the benchmark rate can occur only if ground infrastructure, environmental constraints, staffing and equipment requirements allow triple simultaneous approaches. The increase in actual operations may be less if airspace restrictions prevent full use of the new runway.
- Other planned technological improvements at IAH, such as advanced TMA and RNAV routes, revised wake vortex procedures, and CEFIR would increase the benchmark rate substantially in Optimum and Marginal conditions. The benefit in Marginal conditions assumes all arrivals can use CEFIR to achieve visual separations. In IFR conditions, advanced TMA is the only improvement that affects capacity, thus accounting for the smaller improvement in this scenario.
- The following charts compare actual hourly traffic with the calculated capacity curves for IAH. Note that some hourly traffic points lie outside the capacity curve, especially in IFR conditions. There are many possible reasons why this may occur without affecting operational safety. For example, actual weather conditions during the hour may have been better than the hourly readings in the database, allowing more efficient ATC procedures than were modeled.
- Please note that the extension of Runway 15R/33L was not completed until May 2002. The traffic data in these charts includes the period from January 2000 through June 2002; most of the data was collected before the departure runway was opened. Therefore, the historical data in these charts is not representative of the current capabilities of IAH with all runways available.

These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the airport or for the individual programs.

The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.

HOUSTON – Houston George Bush Intercontinental Airport (IAH)

<i>Weather</i>	<i>Scenario</i>	<i>Configuration</i>	<i>Procedures</i>	<i>Benchmark Rate (per hour)</i>
Optimum Rate Ceiling and visibility above minima for visual approaches (4000 ft ceiling and 8 mi visibility) <i>Occurrence: 71%</i>	Today	Arrivals on 26, 27 Departures on 15R, 15L, 26 <i>Frequency of Use: 43% in Optimum conditions</i>	Visual approaches, visual separation	120-143
	New Runway (2003)	Arrivals on 26R, 26L, 27 Departures on 15R, 15L, 26	Same, with triple simultaneous visual approaches	193
	Planned improvements (2013), including new runway	Same		231
Marginal Rate Below visual approach minima but better than instrument conditions <i>Occurrence: 22%</i>	Today	Arrivals on 26, 27 Departures on 15R, 15L, 26 <i>Frequency of Use: 47% in Marginal conditions</i>	Instrument approaches, visual separation	120-141
	New Runway (2003)	Arrivals on 26R, 26L, 27 Departures on 15R, 15L, 26	Same, with triple simultaneous approaches	193
	Planned improvements (2013), including new runway	Same	Triple simultaneous visual approaches, visual separation	231
IFR Rate Instrument conditions (ceiling < 1000 ft or visibility < 3.0 miles) <i>Occurrence: 7%</i>	Today	Arrivals on 26, 27 Departures on 15R, 15L, 26 <i>Frequency of Use: 46% in IFR conditions</i>	Instrument approaches, radar separation	108-112
	New Runway (2003)	Arrivals on 26R, 26L, 27 Departures on 15R, 15L, 26	Same, with triple simultaneous instrument approaches	132
	Planned improvements (2013), including new runway	Same		138

NOTE: Data on frequency of occurrence of weather and runway configuration usage is based on FAA ASPM data for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time.

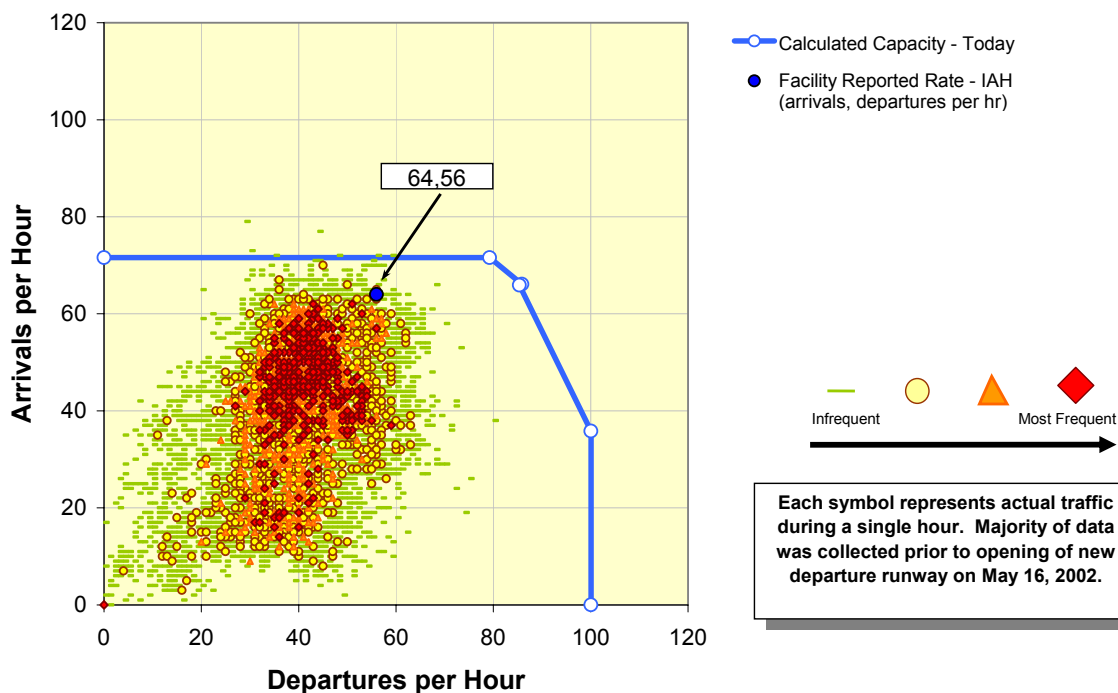
Planned Improvements at IAH include:

- CEFRR, for reduced in-trail separations between arrivals in Marginal conditions.
- Revised wake vortex procedures, to increase departure throughput on closely spaced parallel runways in Optimum and Marginal conditions.
- Advanced TMA/RNAV, to improve delivery accuracy and help IAH consistently utilize available capacity in all conditions.

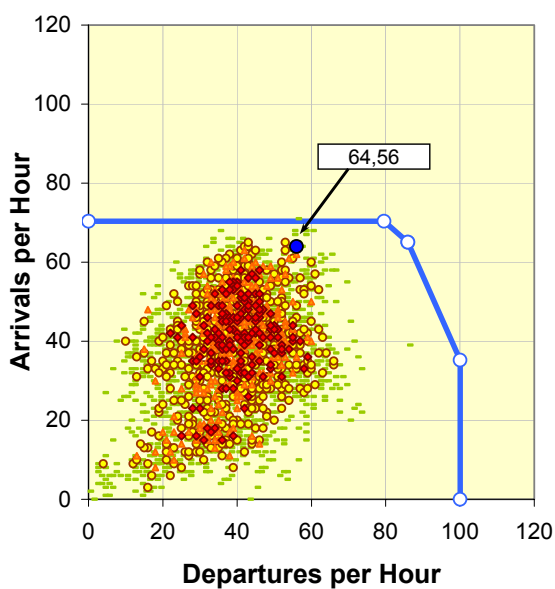
Additional information on these improvements may be found in the Introduction and Overview of this report, under “Assumptions.”

Calculated Capacity (Today) and Actual Throughput

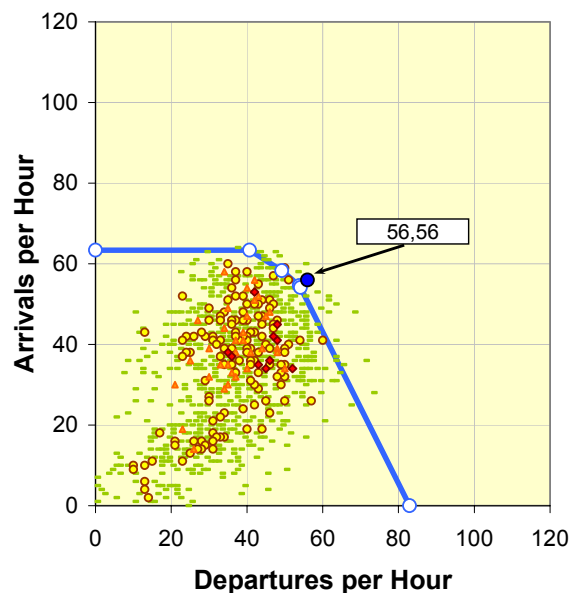
Optimum Rate



Marginal Rate



IFR Rate



Hourly traffic data was obtained from the FAA ASPM database for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time. Facility reported rates were reviewed by ATC personnel at IAH.